

REMARKS

Claims 1-11 are pending in this application. By this Amendment, claims 8, 10 and 11 are amended to delete multiple dependency. No new matter is contained in the amendments.

Please charge any fee deficiency or credit any overpayment to Deposit Account No. 01-2300.

Respectfully submitted,



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5. Method according to claim 4 to discriminate an event sequence from a single molecule against an event sequence from background processes or noise,

characterized in that

- a) it is decided that the event sequence is due to a single molecule, if it is a memory driven event sequence,
- b) it is decided that the event sequence is due to background processes or noise, if it is a non-memory driven event sequence.

6. Method according to claim 5 for single molecule sequencing, **characterized in that**

- a) it is decided that the fluorescence events observed are due to nuclease-liberated nucleotides if the sequence of fluorescence events is a memory driven sequence of events and
- b) it is decided that the fluorescence events observed are due to contaminating nucleotides or other background signals, if the sequence of fluorescence events is not a memory driven sequence of events.

7. Method according to claim 6, characterized in that the fluorescence events are observed in a confocal microscope.

8. Method according to claim 6 [or 7] for analyzing of catalytic complexes, characterized in that

- a) it is decided that the fluorescence events observed are due to characteristics of the catalytic complex if the sequence of fluorescence events is a memory driven sequence of events and
- b) it is decided that the fluorescence events observed are due to contaminating nucleotides or other background signals, if the

5

- 10

- 15

11. Method according to [one of the] claims [5- 10] wherein an oscillating process is analyzed.